

- › **HSV**
- › **Monitoring Relays**
- › **Speed Monitoring Relays**
- › **DIN Rail Mount 35 mm**

- › Control of overspeed, underspeed, operating rate, stopping
- › Measurement via discrete sensors - 3-wire PNP or NPN, Namur, voltage 0-30V or volt-free contact type
- › Works with either NO or NC sensors
- › Time between pulses adjustable from 0.05 s to 10 min.
- › Power-on inhibit time, adjustable from 0.6 to 60 s
- › Inhibit time can be managed via an external contact



Specifications	
Nominal voltage (V)	Code
24 →240 V AC/DC	84874320

Power supply	
Supply voltage Un	24 V →240 V AC/DC
Voltage supply tolerance	-15% / +10%
Operating range	20,4 V →264 V AC/DC
Polarity with DC voltage	No
AC supply voltage frequency	50 / 60 Hz ±10%
Galvanic isolation of power supply/measurement	No
Power consumption at Un	5 VA in AC/3 W in DC
Immunity from micro power cuts	50 ms

Inputs and measuring circuit	
Input circuit 3-wire sensors	PNP or NPN, 12V, 50 mA max.
Input circuit NAMUR sensor	12 V / 1.5 KOhm(s) *
Input circuit Contact	12 V / 9.5 KOhm(s)
Input circuit Voltage input	0 V min. /30 V max. /9.5 KOhm(s) High state 4.5 V min. Low state 1 V max.
Minimum pulse time	5 ms in high and low state
Frequency of measured signal	1.5 m Hz minimum, 22 Hz maximum
Measurement ranges	0,5 s - 1 s - 5 s - 10 s - 1 mn - 5 mn - 10 mn
Threshold adjustment	10 →100% of the range
Fixed hysteresis	5% of displayed threshold
Display precision	±10% of full scale
Repetition accuracy with constant parameters	± 0,5%
Measuring error with voltage drift	< 1% across the whole range
Measuring error with temperature drift	± 0,1% / °C max.

Time delays	
Maximum threshold crossing response time	15 ms
Reset time S2	50 ms minimum (in memory mode)
Reset time	In memory mode (power break) : 1500 ms minimum
Inhibit time delay	On energisation : 0,6 →60 s (0, +10 % of full scale)
Repetition accuracy with constant parameters	± 0,5%
Delay on pick-up	50 ms
Display precision	±10 % of full scale
Outputs	
Type of output	1 single pole changeover relay
Type of contacts	No cadmium
Maximum breaking voltage	250 V AC/ DC
Max. breaking current	5A AC/DC
Min. breaking current	10 mA / 5 V DC
Electrical life (number of operations)	1 x 10 ⁵
Breaking capacity (resistive)	1250 VA AC
Maximum rate	360 operations/hour at full load
Operating categories acc. to IEC/EN 60947-5-1	AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14
Mechanical life (operations)	30 x 10 ⁶
Insulation	
Nominal insulation voltage IEC/EN 60664-1	250 V
Insulation coordination (IEC/EN 60664-1)	Overvoltage category III : degree of pollution 3
Rated impulse withstand voltage (IEC/EN 60664-1)	4 kV (1,2 / 50 µs)
Dielectric strength (IEC/EN 60664-1)	2 kV AC 50 Hz 1 min
Insulation resistance (IEC/EN 60664-1)	> 500 MOhm(s) / 500 V DC
General characteristics	
Display power supply	Green LED
Display relay	Yellow LED
Inhibit display	Yellow LED
Casing	35 mm
Mounting	On 35 mm symmetrical DIN rail, IEC/EN 60715
Mounting position	All positions
Material : enclosure plastic type VO to UL94 standard	Incandescent wire test according to IEC 60695-2-11 & NF EN 60695-2-11
Protection (IEC/EN 60529)	Terminal block : IP20 Casing : IP30
Weight	120 g
Connecting capacity IEC/EN 60947-1	Rigid : 1 x 4 ² - 2 x 2.5 ² mm ² 1 x 11 AWG - 2 x 14 AWG Flexible with ferrules : 1 x 2.5 ² - 2 x 1.5 ² mm ² 1 x 14 AWG - 2 x 16 AWG
Max. tightening torques IEC/EN 60947-1	0,6 →1 Nm / 5,3 →8,8 Lbf.In
Operating temperature IEC/EN 60068-2	-20 →+50 °C
Storage temperature IEC/EN 60068-2	-40 →+70 °C
Humidity IEC/EN 60068-2-30	2 x 24 hr cycle 95 % RH max. without condensation 55 °C
Vibrations according to IEC/EN60068-2-6	10 →150 Hz, A = 0.035 mm
Shocks IEC/EN 60068-2-6	5 g
Standards	
Marking	CE (DBT) 2006/95/EC - EMC 2004/108/EC
Product standard	NF EN 60255-6 / IEC1 60255-6 / UL 508 / CSA C22.2 N°14

Standards	
Electromagnetic compatibility (EMC)	Immunity EN 61000-6-2/IEC 61000-6-2 Emission EN 61000-6-4/EN 61000-6-3 IEC 61000-6-4/IEC 61000-6-3 Emission EN 55022 class B
Certifications	UL, CSA
Conformity with environmental directives	RoHS

Comments	
	The IEC 60947-5-6/1999-12 NAMUR standard does not impose the operating voltage (open circuit voltage) or the load resistance (source resistance of the control amplifier), but it defines the test conditions for which, using the sensor voltage/current characteristics with high and low impedance, the normal operating zones are specified. The great majority of NAMUR sensors use a 12 V supply voltage. Matching the load resistance to the operating voltage allows the nominal switching distance to be maintained.

Dimensions	
HSV	

Curves	

Connections	
HSV - Input circuits	<p> $\approx 24 \dots 240 \text{ V}$ $50/60 \text{ Hz}$ </p>

Connections



